1 2 3 4 5 HUNTERS POINT SHIPYARD 6 RESTORATION ADVISORY BOARD 7 8 9 10 REPORTER'S TRANSCRIPT OF MEETING 11 JANUARY 26, 2006 12 13	HUNTERS POINT SSIC NO. 5090.3.A  1 REGULATORS 2 3 G. PATRICK BROOKS - United States Navy 4 AMY D. BROWNELL - San Francisco Department of Public 5 Health 6 JACQUELINE ANN LANE - U.S. Environmental Protection 7 Agency (EPA) 8 TOM P. LANPHAR - California Department of Toxic 9 Substances Control (DTSC) 10 MICHAEL WORK - U.S. Environmental Protection Agency (EPA) Page 3
14	
1 PARTICIPANTS	1 AUDIENCE
3 FACILITATOR:  4 MARSHA PENDERGRASS - Pendergrass & Associates  5 CO-CHAIRS:  6 KEITH FORMAN - United States Navy  7 Project Managers Office (PMO) West  8 (ACTING) JAMES MORRISON - Environmental Technology,  9 Residents of the Southeast Sector (R.O.S.E.S.)  10  11 RAB MEMBERS  12  13 PATRICIA BROWN - Shipyard artist  14 CHARLES L. DACUS, SR Bayview-Hunters Point resident,  15 Residents of the Southeast Sector (R.O.S.E.S.)  16 CHRIS HANIF - Young Community Developers (YCD)  17 JESSE MASON - Community Window on the Shipyard  18 MELITA RINES - India Basin Neighborhood Association  19 KEITH TISDELL - Bayview-Hunters Point resident  20 RAYMOND J. TOMPKINS - Bayview-Hunters Point Coalition on  21 the Environment  Page 2	3 WAYNE AKIYAMA - Shaw Environmental 4 JAMES ARLINGTON ANSBRO - Bayview-Hunters Point resident 5 BRIAN BALTIMORE - Young Community Developers (YCD) 6 CAROLYN HUNTER - Tetra Tech EMI 7 JOEL McCLURE - Bayview-Hunters Point resident 8 MARY McCLURE - Bayview-Hunters Point resident 9 DARLENE McCRAY - CDM 10 VERLA MORRIS - Bayview-Hunters Point resident 11 RALPH PEARCE - United States Navy 12 MATTHEW L. SHAPS, ESQ Paul Hastings LLP for Lennar 13 GERARD L. SLATTERY - Tetra Tech EC 14 ELI VEDAGIRI - Barajas & Associates, Inc. (BAI) 15 JULIA VETROMILE - Tetra Tech EMI 16 ANGELA WILLLIAMS - Barajas & Associates, Inc. (BAI) 17OO Page 4

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I SAN FRANCISCO, CALIFORNIA, THURSDAY, JANUARY 25, 2006	DR. TOMPKINS: Dr. Tompkins, Community First
2 6:02 P.M.	2 coalition and Bayview-Hunters Point Coalition.
3000	3 MS. PENDERGRASS: Oh, welcome, Mr. Tompkins.
4 MS. PENDERGRASS: Good evening, everybody.	4 And it's the dancing Mr
5 Good evening, everyone.	5 MR. TISDELL: Tisdell.
6 MR. WORK: Good evening.	6 (Mr. Hanif and another attendee
7 MR. BROOKS: Good evening.	7 vocalize.)
8 MS. PENDERGRASS: Welcome, everybody, to the	8 MR. BOARD MEMBER: The reporter can't do that.
9 Hunters Point Shipyard Restoration Advisory Board	9 MS. ATTENDEE: How do you spell that?
10 meeting for Thursday, January 26th, 2006. It's our	10 MR. AKIYAMA: Wayne Akiyama, Shaw
11 first meeting of the year.	11 Environmental.
So, as is our practice tonight, we're going to	MR. FORMAN: I'd be very interested in seeing
13 go ahead and introduce everyone that's in the room.	13 how the court reporter recorded that sound.
No dancing allowed, Mr. Tisdell, and no	MS. PENDERGRASS: We're going to give our
15 entertainment is allowed in this. No entertainment	15 audience and onlookers our complete and undivided
16 tonight.	16 attention as they introduce themselves starting with
MR. TISDELL: Oh, man.	17 MR. AKIYAMA: Wayne Akiyama, Shaw
MS. PENDERGRASS: Okay? Are we all on that?	18 Environmental.
19 We are going to start the year with no entertainment.	MS. PENDERGRASS: Wayne.
20 I'm Marsha Pendergrass, and I'm facilitating	20 Did you get that?
21 tonight, and we will start with	21 THE REPORTER: Yes.
MS. BROWNELL: Amy Brownell, San Francisco	22 MS. PENDERGRASS: Okay.
23 Health Department.	MR. SLATTERY: Gerry Slattery, Tetra Tech.
MS. BROWN: Patricia Brown, artist.	24 MS. PENDERGRASS: Thank you.
25 MS. PENDERGRASS: I'm sorry. Say it again.	25 MR. PEARCE: Ralph Pearce, Navy Remedial
Page 5	Page 7
MS. BROWN: Patricia Brown, Shipyard artist.	1 Project Manager.
2 MS. PENDERGRASS: Thank you, Ms. Brown.	2 MS. PENDERGRASS: Welcome.
3 MS. RINES: Melita Rines, India Basin	3 MS. LANE: Jackie Lane, EPA.
4 Neighborhood Association.	4 MS. PENDERGRASS: Thank you, Ms. Lane.
5 MS. PENDERGRASS: Thank you, Ms. Rines.	5 MR. VEDAGIRI: Eli Vedagiri, Barajas &
6 MR. BROOKS: Pat Brooks, Navy lead Remedial	6 Associates.
7 Project Manager.	7 MS. PENDERGRASS: Did you get that? No.
8 MS. PENDERGRASS: Thank you, Mr. Brooks.	8 Let's do that again.
9 MR. FORMAN: Keith Forman, your BRAC	9 MR. VEDAGIRI: Eli Vedagiri, Barajas &
10 environmental coordinator.	10 Associates.
11 MS. PENDERGRASS: Yay.	11 MS. PENDERGRASS: Okay. Eli, can you spell
MR. TISDELL: Boo.	12 your last name?
MR. WORK: Michael Work with EPA.	MR. VEDAGIRI: V-e-d-a-g-i-r-i.
14 MS. PENDERGRASS: Hi, Michael.	MS. PENDERGRASS: Thank you so much, sir.
MR. HANIF: Chris Hanif, Young Community	15 Thank you.
16 Developers.	16 MS. McCray: Darlene McCray, CDM.
MS. PENDERGRASS: Mr. Hanif.	MS. PENDERGRASS: Did you get that? Okay,
18 MR. MASON: Jesse Mason, resident.	18 great.
19 Glad to see you, Keith.	MS. McClure: Joel and Mary McClure, residents
20 MS. PENDERGRASS: Nice to see you too,	20 of Silver
21 Mr. Mason.	21 MS. PENDERGRASS: Joan and Mary McClure.
22 MR. LANPHAR: Tom Lanphar, your representative	-
23 from the State of California Department of Toxic	23 MS. PENDERGRASS: Joel
24 Substances Control.	24 MS. McCLURE: McClure
25 MS. PENDERGRASS: Welcome, Mr. Lanphar.	MS. PENDERGRASS: and Mary McClure, okay.
Page 6	Page 8
Dogo & Dogo 9	

MS. McCLURE: -- residents. MR. TISDELL: I make a motion to the pass the MS. PENDERGRASS: Residents. Joel and Mary 2 minutes as they are. MS. PENDERGRASS: Mr. Tisdell, there's a 3 McClure. Did you get that? Okay. 4 motion on the floor. THE REPORTER: Christine Niccoli, Niccoli Any second? 5 6 MS. RINES: I second that motion. 6 Reporting. MS. PENDERGRASS: Ms. Rines seconded that MS. RINES: Who? 8 motion. Is there any discussion, deletions, additions, MS. PENDERGRASS: We will not be entertained 9 comments on the minutes? 9 tonight. 10 MR. BROOKS: Are we clear that we have a 10 Miss Hunter? MS. HUNTER: Carolyn Hunter, Tetra Tech EMI. 11 quorum? 11 MS. VETROMILE: Julia Vetromile, Tetra Tech. 12 MS. PENDERGRASS: What's that, Mr. Brooks? 12 MR. BROOKS: Are we clear there's a quorum? 13 EMI. 13 MS. WILLIAMS: Angela Williams, Barajas & 14 MR. TISDELL: Yes. 14 15 MS. PENDERGRASS: That's a good point. 15 Associates. 16 MR. TISDELL: Yes. 16 MR. TISDELL: Boo. MS. PENDERGRASS: Thank you, Mr. Brooks, for MS. PENDERGRASS: Stop it. Mr. Tisdell, you 17 17 18 will not be entertaining tonight. 18 reminding me of that. I saw Melita come in and 19 Mr. Mason, so I thought we did. But we should just go MR. TISDELL: Okay. 19 20 on record and make sure we have a quorum. MS. PENDERGRASS: Thank you. 20 How many full RAB members do we have, 21 MR. BALTIMORE: Brian Baltimore, Bayview 21 22 Mr. Tisdell? 22 resident. 23 MR. TISDELL: We have six. 23 MS. PENDERGRASS: Thank you. MS. MORRIS: Verla Morris, Bayview resident. 24 MS. PENDERGRASS: Six full RAB members? 24 MS. PENDERGRASS: Verna? 25 MR. TISDELL: Yes, that's present. 25 Page 9 Page 11 MS. PENDERGRASS: No. I said how many do we MS. MORRIS: Verla. 2 have on the rolls? 2 MS. PENDERGRASS: Verla? MR. TISDELL: Oh. Ten. MS. MORRIS: Verla, V-e-r-l-a. 3 3 MS. PENDERGRASS: And last name? 4 MS. PENDERGRASS: Ten. And a quorum is --4 MR. TISDELL: -- three -- I mean, well, four. 5 5 MS. MORRIS: Morris. MS. PENDERGRASS: Morris. Thank you. 6 But we have six. 6 All right. Anyone else that we didn't MS. PENDERGRASS: A third? 7 7 MR. TISDELL: A third, but we have six that 8 8 capture? 9 are present. Sir, back at the table? MS. PENDERGRASS: Okay. Very fine. Thank you Put him on the spot. He's not ready. 10 10 All right. Welcome, everybody. Well, tonight 11 very much. We have to go through that --12 we have a jam-packed, fun agenda. So let's start --12 MR. TISDELL: No problem. 13 let's see. We have a presentation by Mr. Brooks, and MS. PENDERGRASS: -- that exercise. 13 14 then we have some subcommittee reports, and we also have Okay. All right. So we have a motion on the 14 15 floor. We have a second. 15 a treatability study question-and-answer session. Any more discussion? 16 Sounds just delightful. 16 Okay. All in favor of accepting the minutes So let's just move right to the approval of 17 18 the December 8th agenda -- meeting minutes. Okay. Has 18 as written for -- from the December 8th meeting as part 19 of the official record, signify by saying, "Aye." 19 everybody had a chance to review the meeting minutes 20 from the December 8th meeting, RAB members? All right. THE BOARD: Aye. 20 MS. PENDERGRASS: Those opposed? Any 21 There's a motion on the floor? 21 MR. TISDELL: I make a motion to pass the 22 abstentions? 23 Two abstentions, let it be noted. All right. 23 minutes as they are. 24 Very good. So those are entered into the record. MS. PENDERGRASS: All right. There's a motion We do have some action items to review. In 25 on the floor --Page 10 Page 12

- 1 December we had one carryover item, and Mr. Hanif of
- 2 Young Community Developers said he would contact Charles
- 3 DePew, the Navy's Contracting Officer, to schedule the
- 4 next Economic Subcommittee meeting.
- 5 Mr. Hanif, has that taken place?
- 6 MR. HANIF: I'll discuss that at the report
- 7 for the Economic Subcommittee.
- 8 MS. PENDERGRASS: So yes or no?
- 9 MR. HANIF: Yes and no, I will not be the
- 10 one -- I'll mention that at the Economic Subcommittee --
- 11 MS. PENDERGRASS: So shall we take this off as 12 a --?
- MR. HANIF: You can take that off.
- MS. PENDERGRASS: We'll take -- okay. So to we're removing Carryover Item No. 1. That's been to satisfied.
- New item would be: The Navy will provide a la list of all businesses in the Bayview community that la have been retained by the Navy contractors. The person 20 authorizing this item was Mr. Morrison, who isn't 21 present yet.
- But Mr. Brooks, did you want to address that 23 for the record?
- MR. BROOKS: Yes. I'm not quite finished with 25 compiling that list, so I'd like to carry it over until

- 1 give over to Miss Lane this evening the advertisement
- 2 for their approval that we will be advertising in the
- 3 Bayview newspaper for the RFP, request for proposal, for
- 4 that. And it is our time line, a projection, hopefully
- 5 by the end of February we will have reviewed, evaluated,
- 6 and negotiated the contract with -- for the new team.
- MS. PENDERGRASS: Okay. So as far as an 8 update on the TAG grant, and you're saying that it's 9 kind of postponed --?
- DR. TOMPKINS: No, no. What it is, is --
- 11 What I'm stating is that we've acted upon this. We set 12 the criteria. We submitted it in. EPA is reviewing it.
- Then we have to submit in the advertisement 14 before they go in the newspaper so it meets federal 15 requirements.
- Then it will be published in the new Bayview 17 and announced on a radio show that -- on KPOO radio that 18 and up for an RFP.
- Then in the month of February, we will review 20 the candidates; and hopefully, by the end of month, we 21 will then taken our vote; and in March you will meet the 22 new TAG grant candidate, employee --
- 23 MS. PENDERGRASS: Okay.
- DR. TOMPKINS: -- for it. So that we are 25 moving on it, and we hope beginning of March they will

Page 13

Page 15

## 1 next month.

- MS. PENDERGRASS: A little too much holiday spirit? All rightie, then. So we are going to carry 4 that over till February?
- 5 MR. BROOKS: Please.
- 6 MS. PENDERGRASS: All right.
- 7 So let the record reflect that New Item 1 will 8 be carried over till the February RAB meeting.
- 9 Item No. 2: "U.S. Environmental Protection
  10 Agency staff will provide a Technical Assistance Grant
  11 update at the January RAB meeting." Mr. Morrison
  12 brought that forward.
- Mr. Tompkins, can you shed light on this?
- DR. TOMPKINS: I'll address that.
- 15 "Dr. Tompkins." Goddamn.
- MS. PENDERGRASS: I'm sorry?
- DR. TOMPKINS: "Dr. Tompkins," please.
- MS. PENDERGRASS: I'm sorry, Dr. Tompkins.
- 19 Please forgive my manners.
- DR. TOMPKINS: Only when I'm -- I must have a made you mad.
- 22 CSF will have submitted in to the EPA the 23 criteria that we'll use for evaluating the next grant, 24 technical grant review.
- Also, I would be -- I apologize, but I didn't

1 be on board. That's our projected time line.

- 2 MS. PENDERGRASS: Okay. So is that something, 3 though, that the subcommittee of the RAB should actually 4 be discussing as --?
- 5 MR. FORMAN: No.
- 6 MS. PENDERGRASS: -- as a subcommittee, or is 7 that something that you're handling?
- 8 DR. TOMPKINS: That's CFC's pro- -- The
- 9 Technical Committee has nothing to do with that at all.
- 10 MS. PENDERGRASS: Okay. All right. Very 11 fine.
- 12 Miss Lane, did you have anything else to add 13 to that?
- All right. Any other questions on that?
- 15 All right. Very good. Then that will also be 16 removed as satisfied.
- 17 All right. Mr. Forman, did you have any 18 announcements this evening?
- 19 MR. FORMAN: I do, indeed. Thank you.
- First of all, Barbara Bushnell unfortunately 21 couldn't be here tonight. She's with her brother who is 22 very, very ill; and she's caring -- helping to care for
- 23 him. And if you could keep her in your thoughts and 24 your prayers, she would appreciate that.
- Just wanted to give you a couple of

Page 16

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1 announcements. I'd like to -- First of all, I'd like
2 to request a slight schedule change. I want to add a
3 short Navy presentation tonight on the landfill to give
4 a slight landfill Site 1 update.
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- As you -- many of you know, we do monitoring 6 on a monthly basis at the landfill, and we have some --7 the latest data to put out; and I'd like Mr. Pat Brooks 8 to give a short presentation following my presentation 9 tonight.
- MS. PENDERGRASS: If I might, I think that's 10 11 an excellent idea; but can we do that after the 12 subcommittee reports?
- MR. FORMAN: Yes, ma'am. 13
- MS. PENDERGRASS: So then we will have the 15 treatability study, a break; we'll have the
- 16 question-and-answer; then we'll have subcommittee and 16 to do is to continue to brainstorm and with your help 17 then that piece. Does that make sense?
- 18 MR. FORMAN: Yes.
- MS. PENDERGRASS: Okay. 19
- MR. FORMAN: Thank you. 20
- MS. PENDERGRASS: Anybody else? 21
- MR. FORMAN: Okay. 22

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- MS. PENDERGRASS: Mr. Tompkins and 23
- 24 Mr. Tisdell, would you all like to share?

MS. PENDERGRASS: Okay.

- DR. TOMPKINS: We're trying to when would be Page 17

1 February, also at 6 o'clock I believe also at the 2 library, we have a Technical Subcommittee meeting.

8 Thursday, February 9th, 6 p.m.

20 that's what we'll be talking about.

3 That's important because I understand the Technical

4 Subcommittee hasn't really met in a period of time.

And we're going to go over Hunters Point

And that's the following -- The previous day,

But what we need to do is -- what I'm required

6 groundwater, the program, what we know about it, and the 7 basics. So it will be like a Groundwater 101 meeting

10 on the 8th, is the Membership, Bylaws and Community

11 Outreach Subcommittee also at the library at 6 p.m. And 12 I'd just like to say there is: What we are talking

13 about is the population of the RAB, the RAB members, has

14 decreased over time, which is natural in some ways.

17 get new members into the RAB and get community

To that end, I just want to make an

22 announcement that the final meeting -- and this is a

23 Citizens Advisory Committee, a C.A.C., meeting; I'll be

25 at 6 p.m., I believe, in this building [indicating], and

24 attending the next one. It's on Monday, February 13th,

18 representatives here and to build up the audience that

19 comes to the Restoration Advisory Board meetings. So

DR. TOMPKINS: So I was trying to coordinate 4 with him when in the agenda.

1 the proper order for me to make an announcement.

- MS. PENDERGRASS: Did you want to be added to 6 the agenda, sir?
- DR. TOMPKINS: Yes, if -- however you wish, 7 8 Madame.
- MS. PENDERGRASS: Okay. We can add you 10 after -- at the community comment period if you'd like.
- DR. TOMPKINS: Okay. Whichever. 11
- MS. PENDERGRASS: Okay. Our community 12 13 co-chair is not here tonight. Mr. Morrison is going to 14 be speaking on her behalf. So, Mr. Forman?
- MR. FORMAN: Yes, ma'am. Actually, I had --15
- MS. PENDERGRASS: You hadn't finished? 16
- MR. FORMAN: Right. I had further Navy 17
- 18 announcements. So --
- MS. PENDERGRASS: Okay. Continue, please. 19
- MR. FORMAN: Okay. Just wanted to quickly go 20
- 21 over some of the dates in the future for meetings.
- We have a Membership, Bylaws and Community 23 Outreach meeting on February 8th at 6 o'clock at the 24 Anna Waden Library.
- And the following day, on Thursday, the 9th of Page 18

- 1 I'll be attending with Barbara Bushnell, your community 2 co-chair.
- 4 Committee meeting, which is the City of San Francisco's 5 equivalent to this meeting, the RAB meeting. And I'll 6 be speaking on the program, just the basics of the 7 program, but focusing in on asking the Citizens Advisory

And we're going to go to the Citizens Advisory

- 8 Committee to nominate a new member. This Restoration
- 9 Advisory Board should have a CAC representative on it. And so I will be there recruiting for a new
- 11 member and for anyone in the audience that also wants to 12 join the RAB. Hopefully, we can get a number of people 13 to cross over into both committees. I think that's 14 healthy for the process.
- 15 End of my announcements.
- MS. PENDERGRASS: And, Miss Hunter, you'll 17 make sure that all of those announcements are duly 18 circulated to everyone else?
- MS. HUNTER: Yes. 19
  - MS. PENDERGRASS: Okay.
- 21 MS. HUNTER: Yes.
- 22 MS. PENDERGRASS: I think that that was really 23 good, Mr. Forman, that -- the purpose of why those 24 meetings are, what's going to happen at those meetings, 25 a little agenda preview. If we could put that in with

Page 17 - Page 20

Page 20

Page 19

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- 1 the announcement, I think it would be -- get a little 2 bit more. Okay.
- All right. As I said previously, Mr. Morrison 4 hasn't made it yet. So if he does come tonight, he is 5 expected -- perhaps we could fit him in later on in the 6 agenda for any community announcements he might have. 7 Is that okay with the RAB? Okay.
- 8 DR. TOMPKINS: Huh?
- 9 MS. PENDERGRASS: All right. I beg your 10 pardon?
- DR. TOMPKINS: I didn't -- I didn't hear you 12 clear. I'm sorry.
- MS. PENDERGRASS: Mr. Morrison hasn't arrived 14 yet, and he's filling in for Miss Bushnell.
- DR. TOMPKINS: Yeah.
- MS. PENDERGRASS: So he might have some 17 community announcements, and I was asking if it would be 18 all right to adjust the agenda when he does come --
- DR. TOMPKINS: I just didn't hear the first 20 part.
- 21 MS. PENDERGRASS: -- if and when he does come.
- All right. So let's continue on, then, at 23 this point with the Navy's treatability study 24 presentation.
- 25 MR. FORMAN: Okay. Lights.

1 then we use that technology to clean up a site or a 2 unit. Sometimes what we like to do is treat it on a 3 smaller scale, and therefore we call it a treatability 4 study.

5 So what this is is a study in a place in 6 Parcel C on the base where we want to try out a 7 technology, gather data from it, and determine how 8 effective it is before we propose to you and to the 9 regulators to use it on a larger scale.

And we have had a number of these on Hunters 11 Point. Sometimes it was successful, and we're going to 12 propose it in the future. And other times it looked 13 like it wasn't a good fit at Hunters Point, and it 14 doesn't really work as well as we wanted it to; then we 15 learn a lot from that too, and then we don't propose it.

Okay. So what are we going to cover tonight 17 in a nutshell? I'll go over a little bit of background 18 information on where we're going to do the treatability 19 study and talk about really what we're addressing in the 20 groundwater, because the contaminants we're going to 21 talk about are not where you can see them if you walk on 22 the base. They're in the groundwater subsurface.

And talk a little bit about the elements of 24 what we're going to do in the treatability study, what 25 we set out to do, what it's going to look like and what

Page 23

Page 21

- 1 MS. PENDERGRASS: Camera?
- 2 MR. TISDELL: Action.
- 3 MR. FORMAN: Okay. Can everyone hear me, 4 including the audience members? Good. Okay.
- Okay. If you could, listen up. And I'd like to take questions, as the schedule indicated, after the break. And what I'm going to try to do -- we're running ahead of schedule tonight, which is great, because I've just requested another presentation to follow this evening before we adjourn, and I still would like to do that and accomplish getting out of this meeting on time.
- Okay. Let's start off. Today's topic is: We have done a lot of different things in the last year at Hunters Point, but I wanted to inform the RAB and get you involved in the latest treatability study we're foing to do at Hunters Point. It happens to be on 17 Parcel C.
- And to refresh those on the RAB's memory or to 19 talk to the audience that maybe hasn't been here before, 20 in the environmental program, a treatability study is 21 really something -- a gauged experiment, an 22 investigation, of a technology at a particular site at 22 [indicating], 23 Hunters Point.
- And it's on a smaller scale usually than it 25 would be if we know the technology's going to work and Page 22

- 1 we're going to collect, and then finally . . . and then 2 just give you a little summary of our approach and the 3 time frame.
- 4 All right. Some of you are much more familiar 5 with Hunters Point than others. If you can follow me up 6 here, I hope you can see this map.
- When you come down Innes here, you enter the 8 base. As you know, we have different parcels. What 9 we're going to be talking about today is Parcel C. 10 Parcel C is where our -- where this treatability study 11 is going to take place. It's going to take place in 12 this area [indicating]. This is San Francisco Bay.
- And it's going to take place in this area
  14 [indicating] because this area has groundwater plumes.
  15 It has some chemicals that are in the groundwater that
  16 are beneath the surface in this area, and you can see
  17 the outlines of these buildings right here [indicating].
  18 It's around the area of three buildings: 231, 211, and
  19 253 Okay
- So talking about this area [indicating]. And 21 where we're going to set up shop, so to speak, is here 22 [indicating], part of Building 253.
- Thank you. Okay. Next slide. Is that 24 everything on the whole slide? Thanks. Just -- Julia, 25 I would probably work better if you just put everything

1 up at the site. When you do that little thing, you sort 2 of tease me, and I don't know if there's something else 3 to say or not. I'm not too good at that.

- Okay. So the Navy always uses acronyms to represent things, and it could be confusing unless you 6 work at this day in and day out. But RU-C1 is really 7 Remedial Unit --
- 8 DR. TOMPKINS: You had it for a second.
- 9 MR. FORMAN: Yeah, okay.
- -- Remedial Unit C1. "C" means it's at 11 Parcel C where I showed you; "1" is just the first of a 12 labeling system we have for a bunch of remedial units.
- What's a remedial unit? Remedial Unit is just 14 a -- really a gathering sort of a collection area, an 15 organized area, where there are contaminants in the 16 groundwater in such a way that if you measure them and 17 contour them, you can see that it's an area. It's a 18 unit of contamination. "Remedial unit" being 19 representing the fact that it's something that we need 20 to clean up, or in our business we call it remediate.
- So it's a unit of groundwater at Parcel C near 22 these three buildings that I showed you.
- Now, the background is -- in these buildings, 24 this, of course, was a shipyard; and they did a lot of 25 very heavy industrial processes. Anything when a ship

1 the things that went on there.

- So a lot of what we're dealing with here is chemicals that were used to clean things, to degrease things, solvents, cleaning materials, things like that. Over time what most likely happened is: These sumps were not perfect over time; and there was piping associated, and there were tanks in the area; and all of these things over time tended to leak. There were probably releases there over a significant period of time.
- Okay. This is a picture of Building 253. We like to show this because we like to show off the building as one of the more interesting buildings on Hunters Point. If you've been out there much, it's -- 15 what, six-, seven-story building. Pretty interesting architecture: a lot of windows. They used to repair 17 and do maintenance on periscopes for submarines in that 18 building, but they did a lot of other interesting 19 processes right alongside it as well.
- Next slide.

Page 25

Okay. So what are we looking at in these chemicals that we want to test this technology on? The primary chemicals as -- again, it's all in the groundwater. It's not in the soil of Hunters Point, but 25 it's in the groundwater. We're looking at these

Page 27

1 pulled in that they needed to have done was pretty much 2 done at Hunters Point.

- But some of the things that Hunters Point
  4 specialized in doing was: It could fix or manufacture
  5 on its own almost any part a Navy ship needed if that
  6 part broke. So you didn't necessarily have to go out to
  7 the manufacturer. A lot of things were built on Hunters
  8 Point and cleaned and repaired.
- 9 So these three buildings were involved in all 10 that. And because they were involved in all that, they 11 did certain things.
- They used things like degreasers. They did a 13 lot of parts washing, and they had a lot of sumps, 14 collection points where they would put parts -- a lot of 15 metallic parts in places and use certain chemicals on 16 them sometimes to strip them down so that they could get 17 to do whatever they needed to that part, whether it was 18 a repair or finishing it, polishing it off. And that 19 was a process that went on for years there at Hunters 20 Point.
- In Building 253, we have solvent tanks, paint 22 booths, dip tanks, things like that. And we also have 23 underground storage tanks for fuel, oil, and solvents 24 that you would expect to find around these buildings. 25 And all they did was basically supply the buildings for Page 26

- 1 chemicals [indicating]. And as the community . . .
- No, it's not. Okay. I'll take lessons later.
- These chemicals are all solvents, as we said:

  4 degreasers, cleaners. And they have names: PCE, TCE,

  5 DCE, and VC. Those are just abbreviations of chemical

  6 names. You're familiar with a lot of them. There's

  7 still a lot of them are used.
- For instance, PCE is a type of chemical you probably find if you were in a dry-cleaning plant; take 10 your clothes off to get dry-cleaned.
- Okay. So those are the chemicals that have the been released into the groundwater over time.
- 13 Okay.
- All right. Other chemicals that are there are 15 DCA; benzene, which is present in a lot of your fuel 16 products; DCB and other petroleum products that are 17 probably associated with those underground storage tanks 18 that were in the ground.
- 19 Okay.
- All right. Well, I hope you can see that in the back row. I don't know how easy this is for you to 22 see. But here's just contours. I love this figure 23 because it really gives you an idea of what we're 24 dealing with.
- Each one of these colors is a different one of

the chemicals that I mentioned. This is PCE, TCE, DCE, 2 and vinyl chloride. Each one of these colors represents 3 areas in the groundwater beneath the surface of areas of 4 concentration of these chemicals. And these are the 5 outlines -- I hope you can see it here -- of the big 6 long building here, 231, 253, 211.

So beneath these and around these buildings, 8 you can see these are different areas where we've done 9 these investigations; and we've used 10 groundwater-monitoring wells, and we've been able to 11 find and plot concentration levels of these chemicals. 12 And as you could see, they overlap, don't follow any 13 particular shape.

And I hope you can make out here, we're also 15 looking at the end of Parcel C and then on into San 16 Francisco Bay.

And that's one of the Navy's concerns, the 18 regulators as well, is that these chemicals that are in 19 the groundwater -- and they've been in the groundwater 20 for decades. Many of these plumes may have been created 21 in the 1950s, 1960s.

As you might know, Hunters Point Shipyard 23 operations -- the proper shipyard operations actually 24 ceased in 1974; and then there was a lessee, Triple A, 25 that came in and did some limited operations on the base

1 after that.

- But many of these plumes may be decades old; 3 but they're still there, contaminants at certain levels. 4 And our concern is -- One of our concerns is to be 5 protective and to eventually to find a good technology 6 to cl- -- to remediate these to clean them up before 7 they reach San Francisco Bay.
- Okay.
- All right. So some things that this 10 treatability study will do. We've already tried this 11 technology that I'm going to explain to you at another 12 site at Hunters Point. It happened to be C5. Remember, 13 now we're talking about C1. Well, we tried it in 2003 14 and 2004 in -- at that Remedial Unit C5 site.

And we have lessons learned from that. It was 16 a pretty successful treatability study there. And we 17 have learned a lot and learned a lot about what we can 18 use to propose solutions for that remedial unit. Now we 19 want to see how well it works at a different place on 20 the base here. But because of those lessons learned, we 20 21 have tweaked what we're going to do in this treatability 21 the years that there's ways to get those microbes to 22 study to get a little more data on how to be effective.

So there's going to be three stages to what we 24 do. The first stage is: We are going to enhance the 25 nonoxygen environment, which is also -- you might have

1 heard the term anaerobic environment -- under the ground 2 where the groundwater is, we are going to enhance that 3 environment.

Then Stage 2 we're going to enhance the 5 oxygenated environment, and I'll get into that a little 6 bit next two slides.

And then Stage 3 we might include adding 8 oxygen as a third stage, kind of a third level of attack 9 on the contaminants to see what happens.

Okav. Next slide. 10

Okay. So some of the things we're going to 12 look at doing is: We are going to see how successful at 13 this particular site on the base this technology is. 14 And we're going to gauge; we're going to gather data at 15 each stage and see really what's happened and how 16 successful the things we're going to introduce into the 17 groundwater -- how effectively they eat the contaminants 18 and reduce the levels of contamination where they are 19 injected.

And then we are going to minimize impacts at 21 the same time so that we don't push anything down deeper 22 into the groundwater or take a contaminant and displace 23 it out into a wider area.

Okay. Okay. 24

25 All right. So Stage 1. What you have to know

Page 31

1 is that when you're dealing with the subsurface, you've 2 got a certain amount of soil. And then when you reach a 3 certain point -- and when we're doing this treatability 4 study, it's -- averages about 10 feet below surface --5 you hit groundwater. And the groundwater's where these 6 chemicals are.

But there's also something else there; and you 8 find this pretty much everywhere, certainly find it at 9 Hunters Point as well. There's little microorganisms in 10 the soil, microbes. And these microbes live in the soil 11 and the groundwater, and they're there naturally.

So what we want to do is: We want to see if 13 we can enhance the environment that certain families of 14 these microbes live in and get them to do an even better 15 job than nature would normally do in reducing the 16 contaminate levels, because over time a lot of these 17 microbes would break down these chemicals into simpler 18 chemicals, okay, and thereby reduce the contaminate 19 levels.

What we have found through the experience over 22 work for us and to reduce the contaminants sometimes 23 very quickly. Okay. So that's what we want to do here.

Now, the first family of microbes that we're 25 going to talk about are these microbes that don't need

Page 32

1 any oxygen, okay? They're not like us. They don't need 2 an environment that has oxygen in which to thrive, and 3 they're called anaerobic microbes. Okay? You can think 4 of them -- in fact, they are sometimes called bugs, the 5 bugs that are in the soil; and they are microscopic, but 6 they are pretty much everywhere.

All right. This family of anaerobic 8 microbes, we are going to enhance their environment. 9 How are we going to do that? For 15 days we are going 10 to feed them, those microbes. We are going to feed them 11 sodium lactate, pretty common material. It's found a 12 lot in consumer products. But the thing about sodium 13 lactate is that these anaerobic bacteria love it, and 14 they thrive with that nutrient.

So you can think of it that we are going to 16 inject a nutrient into this area of the groundwater, 17 okay. And these microbes, these particular microbes, 18 are going to thrive. They are going to multiply. The 19 population of those then is going to go up over that 20 given area. And when it does, they will be eating the 21 sodium lactate. Okay?

Now, what we're going to do then is: We're going to take up the groundwater; we're going to add 24 sodium lactate to it, and then we're going to put the 25 groundwater right back into the same area. And we

Page 33

1 loosely call that whole process recirculation, because 2 anything we draw up we will add amounts of sodium 3 lactate to and we'll put right back into that

4 groundwater area.

Then those microbes will eat the sodium 6 lactate. Okay? And again -- and this is key -- they 7 will multiply. And all of those new microbes they'll 8 have to eat too. So after 15 days, we will stop feeding 9 them the sodium lactate.

And then for a 60-day period, we will watch and gather data. And during that period, all of that greatly increased microbe population will begin to eat. They'll go searching for food, so to speak, and they will be given to reduce the contaminate levels. They will take that PCE, DCE, TCE; and they will essentially ingest them. And when they do so, they will break it down chemically.

So what we're trying to do here is to harness what's already there with mother nature in order to reduce the levels of the chemical contaminants, just like helping out mother nature. All right. So that's 22 Stage 1.

Now, when we're done with that -- and we'll do 24 that a couple of times. We'll probably -- We'll feed 25 them for 15 days, wait 60, feed them again for 16 day --

1 or 15 days, and then --

What, Pat? Probably wait another 60 days --

3 MR. BROOKS: Yeah.

4 MR. FORMAN: -- or so. So we will have a 5 couple rounds of that.

All right. Then we're going to start doing favors for another family of microbes. This other family of microbes is a lot like me and Keith Tisdell, we need oxygen. And these microbes are aerobic, okay? They need an oxygen environment, okay? Now, they're a different family of microbes, okay? So what they need is something a little different.

But we plan to do essentially the same thing:

14 We will extract groundwater. This time we will add

15 sodium nitrate to the groundwater, okay? And then we

16 will reinject that water, and then these aerobic

17 bacteria will then multiply. And I believe they'll also

18 look at the sodium nitrate for about 15 days, and then

19 we'll cut them off.

And then they will begin eating, eating away 21 at the contaminants. And we will take data from 22 groundwater, and we'll see how effective they are during 23 that.

And we'll do that for a couple of rounds of 25 that: 15 days and then 60-day period where they will

Page 35

1 have to find something other than the sodium nitrate to 2 consume. Do that a couple times.

3 All right.

Now, Stage 3 is a decision point. We will be 5 out in the field; we'll be gathering data. We will set 6 up the system that I'll show you in a couple slides here 7 so that we can perform Stage 3 if we need to. But we 8 don't know whether we will or not because, again, this 9 is a study, right? We don't know everything. We don't 10 know how effective this is going to be.

We will add oxygen. We will have the ability 12 to do that if we think we need to boost the overall 13 effectiveness of this project.

Okay. Now, what do we do in Stage 3? We will 15 add oxygen to the groundwater.

Now, I believe, Pat, we added oxygen to the 17 groundwater at that original remedial unit --

18 MR. BROOKS: RU-C5.

19 MR. FORMAN: -- RU-C5 that I talked about 20 earlier.

And we found out that sometimes you have 22 problems being able to uniformly inject the oxygen into 23 the groundwater and to get it to every place it needs to 24 be, okay, where we want the contaminants to be reduced, 25 because you got to get that product -- in this case,

Page 36

1 oxygen -- to the area where the contaminant is because 2 that's also where the microbes are. Because of that. 3 that's why Stage 2 uses sodium nitrate.

Now, if Stage 2 leaves us with some 5 interesting results that we think will -- it would be 6 worth our time to do Stage 3 and introduce oxygen, then 7 that's what we will do. And then we'll have a cycle 8 much like that with the sodium nitrate where we will 9 introduce oxygen that will make those oxygen-loving 10 microbes, those aerobic microbes, thrive and then 11 further reduce the contaminants.

12 Okav.

All right. I did not want to challenge 13 14 anybody on chemistry here, and so this is not the kind 15 of slide that we're going to go over in detail.

But I just wanted to give you an idea that it 17 just so happens that the contaminants that we're going 18 after -- the ones I showed you in the beginning, these 19 [indicating] and these [indicating], but let's 20 concentrate on these [indicating] -- are related. They 21 are kind of chemically related.

They are molecules with a lot of carbon on 23 them and chlorine atoms. They all share that in common; 24 particularly, they are chlorinated compounds. So they 25 have chlorine in them.

Page 37

And again, I'm not trying to stress anyone out 2 with the chemistry here, but this molecule can become 3 this molecule [indicating] if you take away a chlorine 4 atom. And this molecule, this chemical, can become a 5 whole different chemical if you take away another 6 chlorine molecule and so on.

And what we're going to gauge when we take 8 these groundwater samples is: We will be able to 9 determine what are the levels of these chemicals in a 10 groundwater sample, okay, and what's the ratio of them.

Perhaps we were in a plume that had, you know, 12 80 percent PCE and 10 percent TCE and 5 percent DCE. 13 You would expect those microbes as they are eating the 14 PCE and the TCE to eventually reduce these down the 15 chain as they lose their chlorine atoms.

And I just wanted to show you that this is all 17 linked. So that whole process is linked to good solid 18 chemistry and using what's already there by mother 19 nature to help accelerate a process to essentially take 20 away the chlorine, or dechlorinate some of these 21 compounds.

22 Okay.

And in the end of the process, what we want to 24 see is over time the harmless by-products that come out 24 much did it reduce the contaminants, and, you know, what 25 of the end of the chemical reaction, things such as H2O,

1 water.

2 Okav.

All right. And again, I hope you can see from 4 here on, this is -- given the distance, it's pretty 5 tough to see.

But essentially what we're doing here is: 7 We're extracting -- using a pump extracting groundwater. 8 It's going to go into a mixing tank. If you're in 9 Stage 1, we're going to put in sodium lactate; if we're 10 Stage 2, sodium nitrate; and then in Stage 3, we would 11 add oxygen. And then we're going to essentially 12 recircuit or draw through the piping system and put it 13 back down into an injection well.

Very clever technology. Nothing really 15 cutting edge. This has been done in many places across 16 the country.

But the thing you have to understand is, every 18 place in the country, including every site on Hunters 19 Point, is a little bit different below the ground. The 20 subsurface is different. The geology is different. The 21 rocks are different. The grain size of the sediment; 22 the soil is different. Where the groundwater flows to 23 can be different.

All those are different in different places on 25 Hunters Point. So you just don't know sometimes when

Page 39

1 you can use this technology and be effective everywhere, 2 and chances are you can.

So there's better places to use this 4 technology than in some other places, and that's what 5 these treatability studies attempt to do. They give us 6 experience using this, and they tell us a lot more about 7 what would happen if we used all of this on a big scale 8 for that whole big plume instead of just in a little 9 area testing as we do now.

10 Okay.

All right. And as I mentioned earlier, we're 12 going to collect data. We are going to be in the field, 13 and we are going to collect a bunch of data on the 14 groundwater that you can see there.

And that includes -- remember, this stuff 16 [indicating], this lactate, and the nitrate, we inject 17 it. And we're going to measure how much is left of 18 that. We're also going to measure the amount of oxygen 19 in the water and other things like that, and we are also 20 going to study the microbe population a bit.

All of that is just to get a better picture of 22 during the treatability study when we injected these 23 things what was the net effect on the groundwater, how 25 is the nature content of the groundwater after we did

1 what we did.

- Okay. So let me give a quick summary here.
  The chemicals that are in the groundwater beneath the surface at Hunters Point that we are looking at in this treatability study are solvents, degreasers, cleaners, cleaning agents, things like that, that have gotten into the groundwater and some petroleum products that are associated with what those buildings did.
- We are going to first on go into and help out 10 the microbes in the soil that naturally occur there, and 11 we're going to first of all do those that don't need any 12 oxygen to thrive. They are called anaerobic.
- Then we are going to go in and we are going to 14 help give nutrients to those microbes that require 15 oxygen to live, okay, a whole different family of 16 microbes, but in about the same treatment area.
- And when we do this, we -- again, we have had 18 very good luck in the last two years at another area, 19 another remedial unit, on Hunters Point. Those site 20 conditions were a bit different than these site 21 conditions.
- And in fact, this area -- I think it's pretty
  safe to say, this area that we're in now, this RU-C5, is
  probably the most concentrated areas of different
  the chemicals in the groundwater on the whole base. So it

All right. Before I take questions after the 2 break, I just wanted to throw up a question for you to 3 think about tonight; and that is, would the RAB members 4 like a field trip in May?

- Doesn't have to be in May, but that's just the first month I thought of when you'd be ready if you really want to go with us over to the site in Building 253 and see all that equipment that I showed you would be in place. It will be there. It will be to working, and we can go through it together and see what happens.
- So I just want to throw that out to RAB members. I think that would be -- You haven't had a 14 good field trip in a while, and I think that would be a 15 good thing to do.
- MR. MASON: Go through the building?
- MR. FORMAN: To go through the building? Only 18 in the designated area where that's set up. There's 19 some special things we have to do because Building 253 20 has been listed as radiologically impacted. So to go 21 there, you just -- there's some things we have to make 22 you aware of, and you have to go into the area that Pat 23 and I and the rest of the team go to.
- So there will be some guidelines to do that.

  25 But it will be safe, and it will be a really interesting

Page 43

- will be more challenging, and it will yield us a lot of 2 important data for us to hopefully make a proposal to 3 you and to the regulators about what we really want to 4 do to remediate these plumes.
- Okay. And again, the whole idea of a treatability study is to do in a small way to test it what you really hope will work and that you want to then propose in a big way to remediate, for instance, the whole unit of groundwater.
- 10 Okay.
- 11 Quick schedule -- I don't want to dwell on
  12 this too much, but right now we are writing up the work
  13 plan to do everything I've just described here; and once
  14 we write up a work plan, we put it out. RAB members and
  15 the public can read it. The regulators closely review
  16 it, and they will be doing that from mid February to
  17 about early April.
- We hope to go final on the work plan in mid 19 April.
- And then third, fourth week of April we want
  1 to begin field work. We want to be out there and begin
  2 the treatability study. And I think the treatability -2 this one should take about nine or ten months to
  24 complete.
  20
  21
  22
  23
- 25 Okay.

- 1 tour for you. But Building 253 is just an interesting 2 building on its own, so one of the more interesting 3 buildings on base.
- 4 MS. PENDERGRASS: So let's turn on the lights, 5 and let's continue with questions and answers if you 6 don't mind. We have a little time.
- 7 MR. FORMAN: Okay. Am I --? Oh, so I'm 8 early? Good. I thought I went on forever.
- 9 MS. PENDERGRASS: You did.
- 10 MR. FORMAN: Okay.
- 11 MS. PENDERGRASS: I'm just kidding.
- 12 MR. FORMAN: All right.
- MS. PENDERGRASS: Dr. Tompkins.
- 14 MR. FORMAN: Yes.
- DR. TOMPKINS: "Mr. Tompkins" was my dad. No. 16 I had a couple questions.
- 17 MR. FORMAN: Okay.
- DR. TOMPKINS: Geologically since we were 19 talking about the land and the variance in "B" it was 20 landfill. Therefore, you did look at it --
  - MR. FORMAN: Hold on.
- DR. TOMPKINS: In Parcel B when we ze- -- a 23 zero valence iron, it wasn't as successful as in -- what 24 was it? "C"?
- 25 MR. BROOKS: Yes.

Page 41 - Page 44

DR. TOMPKINS: That it was because of 1 a ---DR. TOMPKINS: What do you mean? 2 landfill. Is that the --? Is this a --2. MR. FORMAN: -- way that the --3 MR. FORMAN: No, that's not --3 DR. TOMPKINS: -- solid --? This is not a DR. TOMPKINS: I don't know. 4 4 MR. FORMAN: -- actual bedrock is very, very 5 landfill. This is a solid one? 5 6 close to the current surface. MR. FORMAN: Hold on, Ray. I'm not sure what 7 you mean. There isn't -- I'm not sure what you mean by DR. TOMPKINS: Okav. MR. FORMAN: And you can see that in the 8 that. 9 photos we have gone over, Dry Dock 4, those photos. 9 MR. LANPHAR: Fill. 10 Part of the reason they created Dry Dock 4 is -- where DR. TOMPKINS: It was a fill. I'm not a 10 11 they are is: It is incised, carved, out of bedrock --11 geologist --DR. TOMPKINS: Okay. MS. PENDERGRASS: We can't hear the question. 12 MR. FORMAN: -- right there. 13 Can we? 13 MS. PENDERGRASS: You're so smart. 14 MR. FORMAN: Oh, I thought you said, 14 15 "landfill." You mean in the fill area, the --MR. FORMAN: Okay? 15 DR. TOMPKINS: In the -- In other words, "B" Did I do okay, Mr. Brooks? 16 16 (Mr. Brooks gestures a thumb up.) 17 was the landfill. 17 MR. FORMAN: All right. MR. FORMAN: Right. 18 18 DR. TOMPKINS: One --DR. TOMPKINS: And then where it was first 19 19 20 tested was solid -- it wasn't a landfill. MS. PENDERGRASS: Dr. Tompkins, do you have a 20 MR. FORMAN: Right. 21 21 follow-up question? DR. TOMPKINS: What type of --? How would you 22 DR. TOMPKINS: One more. 22 23 classify this particular site? 23 MR. FORMAN: Certainly. 24 DR. TOMPKINS: In the previous where I had a MR. FORMAN: Okay. The part of Hunters -- the 24 25 dispute previously, do we have solid baseline data prior 25 part of Hunters --Page 47 Page 45 DR. TOMPKINS: Is it solid? It's not a 1 for you doing any work so we know what the volumes and 1 2 concentrations are on the contaminants we're trying to 2 landfill? is what I'm asking. MR. FORMAN: Got it. It is not fill material, 3 remove? MR. FORMAN: Dispute . . . I don't know about 4 right. 5 a dispute; but we have a lot of data from RU-C5, and we 5 DR. TOMPKINS: Okay. 6 have a lot of groundwater data from our basewide MR. FORMAN: Well -- okay. One of the things 6 7 you got to -- and by the way, Mr. Brooks is the 7 groundwater-monitoring program that we have used. 8 hydrogeologist amongst the two of us, but let me take a MR. BROOKS: I could take that. 9 The work plan includes a solid baseline 9 crack at this. 10 assessment of the conditions. There is, but one of the things about Hunters 11 Point is: The original promontory, the peninsula that DR. TOMPKINS: Prior before treatment? 12 jutted out into the bay, actually came out into parts of 12 MR. BROOKS: Prior to treatment. 13 "C." So there are parts of "C" here that are really 13 DR. TOMPKINS: Thank you. 14 bedrock, bedrock that has been raised, okay, very close 14 MS. PENDERGRASS: Okay. So we can get that on 15 to the very surface of the earth. 15 the record, because the tape will not reflect 16 Mr. Brooks' comments, so can you say those again, So a lot of it isn't fill material either. 17 It's bedrock. It's very close to surface, and it's 17 please? MR. BROOKS: The work plan will include the 18 original land that was not created by the other filling 19 solid analysis of baseline conditions prior to 19 of the bay. DR. TOMPKINS: Excuse me. Geology, what do 20 treatment. 20 21 you mean "raised"? What do you mean by "raised"? I 21 MR. FORMAN: Okay. 22 mean, was it man-made or earthquake --22 MS. PENDERGRASS: Thank you, sir. MR. FORMAN: I'm sorry. I was unaware of it. 23 MR. FORMAN: No, no, no. 24 I was not here. I was unaware of the dispute between -DR. TOMPKINS: -- or what do you say "raised"? 24 MR. BROOKS: Yeah. You were at another MR. FORMAN: The bedrock is tilted in such 25 25 Page 46 Page 48

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1 dispute.
                                                            1 different stages of breakdown.
         DR. TOMPKINS: No problem.
                                                                   Well, what you want to do is get down -- you
         MS. PENDERGRASS: All right. Mr. Tisdell and
                                                            3 should have quite a bit of ethene; and you should have a
 4 then Ms. Brown.
                                                            4 lot of products that, as you hinted at, are kind of --
        MR. TISDELL: Mr. Forman.
                                                            5 are the waste, or the excretions, of these microbes.
         MR. FORMAN: Yes, sir.
                                                            6 You know, they live a certain duration. They eat, they
         MR. TISDELL: Now, if I got this right, the --
                                                            7 reproduce rapidly, and then die.
 8 wait a minute, wait a minute. The PCE and all -- all
                                                                   MR. TISDELL: Oh, okay.
 9 them --
                                                                   MS. PENDERGRASS: And their death is a good
                                                            9
 10
        MR. FORMAN: Yes.
                                                           10 thing.
11
        MR. TISDELL: -- the PCE --
                                                           11
                                                                   MR. FORMAN: Pardon?
12
        MR. FORMAN: Yes.
                                                           12
                                                                   MS. PENDERGRASS: I'm sorry.
13
        MR. TISDELL: -- the TCE and the DCE --
                                                           13
                                                                   MR. TISDELL: That's a good question.
14
        MR. FORMAN: Yes.
                                                           14
                                                                   MR. HANIF: You're entertaining tonight.
15
        MR. TISDELL: -- that can be eaten up by
                                                           15
                                                                   MS. PENDERGRASS: Ms. Brown?
16 the -- by the -- them things, the microbes --
                                                           16
                                                                   MR. TISDELL: That's a good question.
        MR. FORMAN: The bugs, yes, the microbes.
17
                                                           17
                                                                   MS. PENDERGRASS: Ms. Brown.
        DR. TOMPKINS: Yeah, the bugs.
18
                                                           18
                                                                   MR. FORMAN: All your questions are good
19
        MR. FORMAN: Yes.
                                                           19 questions.
20
        MR. TISDELL: Okay, and their waste is
                                                           20
                                                                   MS. BROWN: My question is, will you test into
21 harmless, right? That's so it come -- you know, they
                                                           21 the bedrock?
22 eat them; and then, you know, it comes out to nothing.
                                                          22
                                                                   MS. PENDERGRASS: Will you test into the what?
        Now, what about the V---?
23
                                                           23
                                                                   MS. BROWN: Into the rock.
24
        MS. PENDERGRASS: Their waste is harmless?
                                                          24
                                                                   MS. PENDERGRASS: Oh, into the rock.
25
                                                                   MR. BROOKS: The test is primarily in the A
        MR. TISDELL: What about the VCs, the --
                                                          25
                                                  Page 49
                                                            1 aquifer. So while the bedrock is present below the bay
 1
        MR. FORMAN: Those -- okay.
        MR. TISDELL: -- vinyl chloride?
 2
                                                            2 aquifer, there's no need to test down there because that
        MR. FORMAN: That's part of the chemical
 3
                                                            3 part of it's not contaminated. The contaminant is
 4 chain.
                                                            4 limited to the more shallow sediment tank consist of
                                                            5 fill and some marine sediments. Below that is bedrock.
        MR. TISDELL: Right. Okay. Now, they are not
 6 going to be -- I mean, the bugs not going to eat that,
                                                                   MS. PENDERGRASS: Excellent.
 7 right?
                                                           7
                                                                   Mr. Tisdell, your third question.
        MR. FORMAN: Well, some do, yeah. Some of
                                                                   MR. TISDELL: Yes. Now, just like Miss
                                                           9 Pendergrass said, the -- them bugs dying off is a good
 9 them break down --
                                                           10 thing. The bugs dying off is a good thing?
10
        Can you get back to the . . . ?
        MR. TISDELL: Excuse me. I said the wrong
11
                                                                   MR. FORMAN: Well, it's not a good thing; it's
12 way.
                                                           12 not a bad thing. It just is. Those bugs die anyway.
13
        MR. FORMAN: Okay.
                                                          13
                                                                   MS. PENDERGRASS: "It just is."
                                                                   MR. TISDELL: Yeah, they -- they -- but I'm --
14
        MR. TISDELL: I'm sorry.
        MR. FORMAN: No, you didn't say anything
15
                                                          15 say, like, with them eating all the chemicals and all
16 incorrectly.
                                                          16 that stuff ---
17
        MR. TISDELL: Yes, I did too.
                                                          17
                                                                   MR. FORMAN: Yes, they die.
        MR. FORMAN: What you want to get down to --
                                                                   MR. TISDELL: - they die in the ground, and
18
                                                          18
19 and reme- -- it's -- if this were a perfect process,
                                                          19 isn't that recontaminating the ground?
20 right, then there wouldn't be any need to study it,
                                                          20
                                                                   MR. FORMAN: No.
21 right?
                                                          21
                                                                   MR. TISDELL: Okav.
                                                                  MR. FORMAN: Them dying -- They grow, they --
22
        After all three stages, okay, you will still
                                                          22
23 find a little bit of this [indicating], you know, a
                                                          23 They multiply, they grow, and they die as a natural part
                                                          24 of nature on a microbial, microscopic level, okay.
24 little bit of that [indicating], a little bit of this
25 [indicating], a little bit of that [indicating],
                                                                   MR. TISDELL: Okay. Thank you.
                                                 Page 50
                                                                                                            Page 52
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If not, we could -- I mean, yeah, there's --MR. FORMAN: So all we're doing is creating an 2 this type of process [indicating] is known as in the 2 environment with a lot of nutrients for them to 3 ground, or in situ. So it's -- But there's different 3 accelerate the population so that there's more of those 4 method -- different in situ, in the ground, methods of 4 microbes to attack the contaminants, break them down. 5 things that you could throw at contaminants to reduce 5 And the more they can do that, the more generations of 6 them because they reproduce very rapidly; they can do 6 them. 7 that; and they are all in different rates eating the MS. PENDERGRASS: All right. Thank you. 8 MR. FORMAN: Okay. 8 contaminants, different areas. MS. PENDERGRASS: Are there any other MS. PENDERGRASS: Mr. Hanif? 10 questions regarding --? MR. HANIF: Just wondering, basically, they 10 MR. FORMAN: Again, I'd just like to have 11 metabolize, the contaminants? Is that what's happening? 12 people think about wanting to get together on a field MR. FORMAN: Well, they just -- they live off 13 trip where we would take you there, educate you about 13 of the -- right. They live off of the chemical 14 the building and everything, and we could see one of 14 compounds that are found in the contaminants. And so 15 these things in action. 15 it's a process of them. I guess you could say, on a MS. PENDERGRASS: Is there interest in that by 16 microbial level ingesting them and then digesting them. 17 a show of hands how many people would be interested in MR. BROOKS: It's like food. 17 18 going on a field trip in May? Sounds like you could MR. FORMAN: Maybe because they are on a 18 19 microbial level; they are living organisms, yeah. So 19 schedule that. 20 essentially it is -- I think is -- was it Keith that 20 MR. FORMAN: Great. 21 said a "waste" product? Yeah. 21 MS. PENDERGRASS: Okay? MR. FORMAN: Thank you. 22 MS. PENDERGRASS: Okay. And their waste is a MS. PENDERGRASS: Real good. All rightie, 23 23 good thing. Oh, follow-up question from Mr. Tompkins. 24 then. 24 25 DR. TOMPKINS: My dad is Mr. Tompkins. I keep 25 MR. TISDELL: Very good, Keith. Page 55 Page 53 MS. PENDERGRASS: So you'll take care of I 1 telling you that. MS. PENDERGRASS: Doctor, doctor. 2 scheduling that? 2 MR. FORMAN: Yes, ma'am. DR. TOMPKINS: He's not with us anymore. 3 MS. PENDERGRASS: All right. Real good. 4 MS. PENDERGRASS: And I'm not -- and I'm not So why don't we take a ten-minute break, 5 being -- I'm sorry. I'm not being disrespectful. 6 refresh, revive, and come back fully alive in ten DR. TOMPKINS: My dad's not with us anymore, 7 minutes. Thank you. 7 okay? (Recess 7 p.m. to 7:10 p.m.) MS. PENDERGRASS: Okay. 8 MS. PENDERGRASS: All right, folks, let's get DR. TOMPKINS: On this -- Keith, as we -- we 9 10 the second half of this party started. Don't make me 10 discussed prior on the -- with the zero valence iron --11 bang my gavel again. Let's have some order around here. 11 and I understand that this is the feasibility to see All right. If we could have Mr. Hanif give 12 does is [sic] for your work -- are there other 13 his subcommittee report, we would start with that. 13 technologies, say, that this doesn't get the results out MS. RINES: What? 14 that you may defer to in terms of the cleanup or the MR. TISDELL: Subcommittee report. 15 possibilities? 15 MS. PENDERGRASS: Mr. Hanif would start with MR. FORMAN: If this doesn't get the results, 16 17 giving his subcommittee report. 17 then we would be required to figure out a technology MR. HANIF: Okay. Basically --18 that does remediate the plumes. 18 MR. TISDELL: Speak up, please. DR. TOMPKINS: Are there any others within 19 MR. HANIF: Basically, I've been playing phone 20 cost efficiency factors that you may consider? 21 tag with Charles DePew and Cindy Kolodji; and due to the MR. FORMAN: Well, there probably will be. 22 work load that I have currently with Young Community 22 The Parcel C feasibility study you're referring to, 23 Developers, I'm actually going to step down, but I will 23 that's not coming out for a while, but that will have to 24 incorporate a number of solutions of which we are hoping 24 be a support.

25 that this will be one.

Page 56

James Morrison has volunteered to actually

25

I take over as chair for the Economic Subcommittee. So MR. MASON: JMason147 hotmail --2 that will rest in his hands. 2 @hotmail.com --I will make sure -- I've already talked to MS. PENDERGRASS: If you could just give that 4 Carolyn Hunter. I will make sure that the meeting date, 4 to Miss Hunter. 5 contact numbers and that type of thing are specifically MR. MASON: -- and yahoo.com. 6 relayed to her. 6 MS. PENDERGRASS: Okay. And I want to make the offer that if the 7 MR. FORMAN: Okay. 8 library's not available, they can use YCD as a standing 8 MS. PENDERGRASS: Real good. 9 meeting place, and I'll be 100 percent support with that How about the Radiological, Technical, Risk --10 as well. 10 are they all together now? 11 MS. PENDERGRASS: All right. So, Mr. Hanif, 11 MR. TISDELL: Yes. 12 we can count on you to update Mr. Morrison and get 12 MS. PENDERGRASS: Okay. So is that the R. 13 him --13 Tech R.? RTR? Who's chairing that meeting? 14 MR. HANIF: Yes, I will. 14 MR. TISDELL: Miss Bush- --15 MS. PENDERGRASS: -- up to speed? 15 MS. PENDERGRASS: Miss Bushnell? And Mr. Morrison, do -- I mean, I know this is 16 16 MR. TISDELL: Miss Bush- --17 all rather sudden; but is there a date that you might MS. PENDERGRASS: Okay. I'm facilitating the 17 18 want to throw out for your first meeting? 18 meeting tonight, okay. So --MR. MORRISON: That would depend on after we'd MR. TISDELL: I know, but you don't know 20 meet, and then we could set up a date. 20 what's -- it's something that happened. MS. PENDERGRASS: Okay. All right. So you'll 21 MS. PENDERGRASS: I will. So can you -- sit 22 keep us apprised? 22 down. 23 MR. MORRISON: Yes, definitely. 23 MR. TISDELL: No. MS. PENDERGRASS: Very good. Thank you. 24 24 MS. PENDERGRASS: Okay. MR. HANIF: Carolyn Hunter will be made 25 25 Mr. Morrison, do you have a report on behalf Page 57 Page 59 1 abreast of that. 1 of Miss Bushnell tonight? 2 MS. PENDERGRASS: I beg your pardon? MR. MORRISON: Yes. Barbara is meeting with MR. HANIF: She will be made aware -- Carolyn 3 the hospice tonight with -- her brother has two days to 4 Hunter will be made aware of that so that that will 4 live so that she's there making those arrangements. 5 support the distribution of information for that MS. PENDERGRASS: Did you have a meeting on 6 meeting. 6 her be- -- report on her behalf for the subcommittee for MS. PENDERGRASS: Well, thank you, Mr. Hanif. 7 the Radiological or Technical Review Committee? All right. Mr. Mason, you had something to MR. MORRISON: No. She had to leave all of a 9 add to that? 9 sudden. MR. MASON: Yeah. I would very much like that 10 MS. PENDERGRASS: Okay. 11 information in an E-mail, because I haven't been able to 11 MR. MORRISON: So I will get that information 12 make those meetings. But my concerns are the really --12 to you as soon as possible. Probably see her in a 13 well, my concerns are the same, but I would like to be 13 couple of days. Thank you. 14 at that meeting to talk about that. 14 MS. PENDERGRASS: Thank you. 15 MS. PENDERGRASS: All right. So let the 15 Okay. Mr. Tisdell. 16 record reflect that Mr. Hanif and Mr. Mason will 16 MR. TISDELL: I made a phone call to Miss 17 schedule a meeting with Mr. Morrison so that -- to 17 Barbara Bushnell because Mr. Ray Tompkins had stepped 18 debrief, and then Mr. Morrison will contact Miss Hunter 18 down from that committee because of his father. His 19 with a date for the -- for a Economic Development 19 father has passed. And I talked to Mr. Morrison because 20 meeting. Is that okay? 20 Barbara wasn't there, and I told him that Mr. Ray 21 MR. FORMAN: Sounds great. 21 Tompkins would be willing to step back as co-chair of 22 the Technical Committee. Jesse, do we have your current E-mail address? 23 I just want to make sure that --23 I was trying to get to her, but I didn't know 24 MR. MASON: Yeah. 24 her brother . . . , and so I left a message with -- with 25 MR. FORMAN: -- that we do. 25 Mr. Morrison about that to let Ray take back over the Page 58 Page 60

1 Technical Committee, and they probably touch bases I been doing on the back here which kind of give the 2 sometime before the next RAB. So that's just 2 summary and the date? I mean, this is just for, you 3 information for the RAB. 3 know, a two-month period, but --MS. PENDERGRASS: Well, Dr. Tompkins, is MR. FORMAN: Right. 5 that -- is that all right with you, to kind of touch 5 MS. PENDERGRASS: -- that would be --6 base with Miss Bushnell maybe in a week or so. I would MR. FORMAN: But that's a good question, 7 suspect? 7 because that is what we do on the Monthly Progress DR. TOMPKINS: Especially since I went through 8 Reports now, Ray. We basically tell you what's coming 9 it this month, yes. In other words, I would project for 9 up in about the next 60 days. 10 March, since they already have the agenda, that by that MS. PENDERGRASS: So would it -- are you 11 time, we'll have the new TAG grant consultants on 11 asking for a longer period of time? I hear you saying. 12 board --DR. TOMPKINS: Yeah, a long -- for the one 13 MS. PENDERGRASS: Okay. 13 year, so I could -- for the time of their contract that 14 DR. TOMPKINS: -- so that we can then -- I'd 14 they will be with us. I would like to be able to talk 15 like to request from the Navy -- I had it before, but 15 to them. 16 with the passing of my father, it got mislaid -- a MS. PENDERGRASS: Does that make sense --16 17 listing of all the priority of projects for the year 17 MR. FORMAN: Okav. 18 2006. MS. PENDERGRASS: -- for you, Mr. Forman? 18 And I would subsequently also request that you 19 Because it's just really projecting this out just a 20 E-mail the state EPA and the State of California that 20 little --21 listing, Tom and Mike, so that they could review. 21 MR. FORMAN: Sure. And I like you to prioritize what are the 22 MS. PENDERGRASS: -- further. 23 important issues so that when I review the candidates DR. TOMPKINS: And start in dates in terms so 24 for the TAG grant, they would know what's coming up. 24 that we can try and time the reports in a timely 25 when, who do they need on board their team and et cetera 25 manner --Page 61 Page 63 1 to do a proper evaluation, and they could then also MR. FORMAN: Sure. 1 2 discuss with us how much time would it take for the DR. TOMPKINS: -- and be on time so that we --2 3 evaluation. 3 MS. PENDERGRASS: Okay. 4 MR. FORMAN: Okay. DR. TOMPKINS: -- could be of assistance for 4 5 MS. PENDERGRASS: Would it be helpful --? 5 the ---DR. TOMPKINS: I would really appreciate it if 6 6 MS. PENDERGRASS: Why don't we put that as 7 you get it to me soon as possible. 7 an --MR. FORMAN: And that's projects for the DR. TOMPKINS: -- community. 8 9 calendar year 2006? 9 MS. PENDERGRASS: -- action item --10 DR. TOMPKINS: Calendar 2006. 10 MR. FORMAN: Okay. 11 MR. FORMAN: Okay. 11 MS. PENDERGRASS: -- to follow up on? 12 DR. TOMPKINS: And if there's something And when did you need that by? 12 13 overlaps, you see a 2007 that's related and that should 13 DR. TOMPKINS: As soon as possible, please, 14 be reviewed --14 because I'd like to execute with the app- -- with the 15 MR. FORMAN: Okay. 15 EPA's approval, I'd like to start interviewing 16 DR. TOMPKINS: -- please also include that so 16 candidates within two weeks, two to three weeks, after 17 that when I sit down with the candidates, I could 17 we advertise. 18 present this information, and they could then 18 MS. PENDERGRASS: Okay. 19 intelligently discuss that with me --MR. FORMAN: Okay. So I'll get that to you 19 20 MR. FORMAN: Sure. 20 next week. 21 DR. TOMPKINS: -- in what they can and can't 21 DR. TOMPKINS: Beautiful. Thank you. 22 do. 22 MS. PENDERGRASS: Okay. 23 MR. FORMAN: Great. 23 DR. TOMPKINS: I appreciate it. 24 MS. PENDERGRASS: Would it be helpful if it's MS. PENDERGRASS: So let's just say by the 24

25 in the same format as the deliverables that they have

Page 64

Page 62

25 11th of February, 15th of February?

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MR. FORMAN: Okay.
 1
                                                                   MS. PENDERGRASS: -- that needs to be
        MS. PENDERGRASS: Is that all right?
 2
                                                           2 massaged, and it would be helpful if it was kind of
                                                           3 flowed into this kind of grid but month by month and --
 3 Okey-dokey?
        Can we have that microphone?
                                                                   MR. FORMAN: And I'll just provide you a brief
 5
        DR. TOMPKINS: That would be Wednesday?
                                                           5 one- or two-sentence a description of each one so you
        MS. PENDERGRASS: Yeah.
 6
                                                           6 really know. Sometimes the title alone doesn't
                                                           7 necessarily describe it the way you want it.
 7
        DR. TOMPKINS: 15th.
 8
        MS. PENDERGRASS: Okay.
                                                                   MS. PENDERGRASS: Mr. Lanphar had something to
        All right. Then the Membership and Bylaws --
                                                           9 add to that and then you, Mr. Tompkins.
10 I'm sorry. I'm sorry, Mr. Work. Please forgive me.
                                                          10
                                                                   DR. TOMPKINS: Okay.
        MR. WORK: Thanks. Maybe Keith is already
                                                                   MR. LANPHAR: I was just wondering,
12 thinking on these lines, but I was going to say, why --
                                                          12 Dr. Tompkins, if you wanted it for a year, calendar
13 why couldn't we just provide --?
                                                          13 year, or the year of the -- of the contract. If you're
14
        MR. TISDELL: Speak up, please.
                                                          14 starting in March, do you want it all the way to
        MR. ATTENDEE: Speak up.
15
                                                          15 March 2007?
16
        MR. WORK: Why couldn't we just provide the
                                                                   DR. TOMPKINS: I'd want it for a calendar year
                                                          16
17 FFA schedule to Ray and -- and --?
                                                          17 and any projects that go --
        MR. BROOKS: We kind of been through that, Ray
18
                                                          18
                                                                  MR. LANPHAR: Okay.
19 and I; and we just need a little more information than
                                                          19
                                                                  DR. TOMPKINS: -- over into March.
20 what's on the FFA schedule. I've got -- just if we
                                                          20
                                                                  MR. LANPHAR: Okay.
21 added to one that we had before and just bring it
                                                          21
                                                                  DR. TOMPKINS: Just as to the side note to the
22 through the end of 2006, that will be okay?
                                                          22 Board members --
        DR. TOMPKINS: 'Cause there was so much on
                                                          23
                                                                  MR. FORMAN: Okay.
24 whatever document you sent me --
                                                                  DR. TOMPKINS: -- the reason I'm asking to
                                                          24
                                                          25 step back into it, my father, shoot, asked me to deal
        MR. BROOKS: Yeah.
25
                                                 Page 65
                                                                                                            Page 67
        DR. TOMPKINS: -- some months ago --
                                                           1 with this on his deathbed and to come back and to be the
2
        MR. BROOKS: Yeah.
                                                           2 chair. So I'm carrying out his wishes.
        MR. FORMAN: It was too much for you.
                                                                  MS. PENDERGRASS: Thank you, Dr. Tompkins.
3
        DR. TOMPKINS: -- it was so --
                                                                  MR. MORRISON: I like to say, one, I don't
 5
        MR. BROOKS: At least 25 --
                                                           5 think Barbara will have any objection to it. But
6
        DR. TOMPKINS: -- I just needed the high
                                                           6 problem -- part of my objection is that you had refused
                                                           7 to give any documentation or information on the meetings
7 points of what we --
        MR. FORMAN: Okay.
                                                           8 that you would have. You would come and want to give
9
        DR. TOMPKINS: -- needed.
                                                           9 lecture in an elementary manner.
10
        I didn't have a sort of like a decoding grid
                                                                  And I'd like to know if you'd be -- if you
                                                          10
11 next to it --
                                                          11 take it over, will we get reports? And if you are not
12
        MR. FORMAN: Right, right, right.
                                                          12 going to give reports, there's no need in taking it over
        DR. TOMPKINS: -- of what this meant, what
13
                                                          13 and informing us of who attends and what was the subject
14 this . . .
                                                          14 matter instead of coming to the RAB and always and
                                                          15 making these elementary speeches.
15
        MR. BROOKS: That was 30 pages, the decoding
16 brief.
                                                          16
                                                                  MS. PENDERGRASS: All right.
                                                          17
17
        DR. TOMPKINS: You --
                                                                  DR. TOMPKINS: Do you wish me to address this?
18
        MS. PENDERGRASS: All right. So --
                                                          18
                                                                  MS. PENDERGRASS: Not really. There's no need
19
        DR. TOMPKINS: But it was lot --
                                                          19 to address that at this point. At this point, I think
        MS. PENDERGRASS: So you all --
                                                          20 that's a conversation that needs to happen between Miss
20
        DR. TOMPKINS: -- and I couldn't figure it
21
                                                          21 Bush- -- Miss Bushnell and Mr. Tompkins 'cause that
22 out.
                                                          22 hasn't formally happened at this point.
23
        MS. PENDERGRASS: So it sounds to me like
                                                          23
                                                                  So we're going to move on the age- -- in the
24 there is a template in place --
                                                          24 agenda to Mr. Tisdell and the -- what group are you? --
       MR. FORMAN: Yes.
                                                          25 Membership, Bylaws and Outreach.
                                                 Page 66
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- MR. TISDELL: Somewhere. Okay. We had our 2 meeting on the 11th of January, had some pretty good 3 attendees, but we need more RAB members to attend.
- We talked about RAB -- RAB member recruiting. 5 because we are down to ten, and the Environmental 101 6 taught by Mr. Keith Forman, you know, and commu- -- the 7 Community Notification Plan update. And here's --8 here's a copy of the minutes here.
- And if you're interested, and the next meeting 10 will be February the 8th at 6 o'clock at the Bayview 11 Anna Waden Library. So can I please have your 12 attendance? 'cause we need help in discussion about what 13 you would like to see the RAB -- I mean, which to see --14 which way you would like to see the RAB to go.
- 15 Thank you.
- MS. PENDERGRASS: Mr. Forman? 16
- 17 MR, FORMAN: If I could just quickly, yeah, 18 second what Keith is saying is: One of the things I 19 committed to doing is, we need to get a new generation 20 of RAB members along with our current RAB members. So 21 we need new membership, and we need help in figuring out 22 how to do that. That's not an easy thing to go.
- And what I committed to do is: Once we have a 24 certain number of new members with us, the new members 25 and anyone else who wants to, I'll commit to a Saturday.

Page 69

1 We'll find a nice place to hang out on Saturday, and all 2 day we'll go through Hunters Point Environmental 101; 3 and I'll just teach the basic elements of the program 4 and what we're all about.

I mean, we'll do that all day Saturday once we 6 reach a point in the program where we have enough new 7 members and then we have interest from any current 8 members.

9 MS. PENDERGRASS: Okay. That sounds good.

Okay. I just want to remind folks that the 11 best way to get any kind of board members on any board 12 is by referral from the other board members.

So there are -- there's a stack of 14 applications over on the table. So if you -- if each 15 member would take two or three applications with you and 16 discuss with folks around the neighborhood, you know, 17 submit one to them, that would be great, help us to kind 18 of round out representation.

All rightie, then. We are finished with 20 subcommittee reports, and we had Mr. Dauc- -- Dacus and 21 Mr. Morrison join us and so wanted to make sure that 22 Mr. Morrison didn't have anything else that he wanted to 23 provide in terms of anything today?

MR. MORRISON: No. 24

MS. PENDERGRASS: All right. Very good.

All right, then. Let's have our landfill 2 update, and then we will have a final comment by 3 Dr. Tompkins.

DR. TOMPKINS: Hmm-mm. No need to.

5 MS. PENDERGRASS: No need to?

DR. TOMPKINS: No need to. 6

MS. PENDERGRASS: Oh.

8 MR. TISDELL: Whew.

MR. BROOKS: Okay. As most folks know, we do 10 monthly landfill gas monitoring out at the landfill.

11 For those of you who don't, I think this program's been 12 going on now for about three years.

And the reason I want to talk to you today is 14 because something a little bit different happened, and I 15 just want to make sure everybody knows about it. So 16 I'll give you a brief review of the stuff that we do 17 each month and the results that we had up through 18 December, and then we'll talk about what just happened 19 recently.

This is part of our monthly monitoring 21 program. These are all of the monitoring points that we 22 go to, the GMPs. We call those our gas-monitoring 23 probes. Those are probes that are in the earth, and we 24 measure the methane gas down there in those probes.

We have a series of them. We have a wall that 25

Page 71

1 captures the landfill gas here along the north side of 2 our landfill; and over here in this kind of gray area 3 [indicating], this is where the University of 4 California-San Francisco research facility is.

And so we have probes on both on the landfill 6 site of the wall and then on the U.C.S.F. side of the 7 wall. And of course we're most -- we know there's going 8 to be some methane over here on the landfill side of the 9 wall. That's where we want to keep it.

When we get some readings of methane over here 11 on the U.C.S.F. side of the wall, then that causes us 12 some concern. And what we do there is: We have two 13 units that can extract methane. They're on site at all 14 times. We have got a generator out there. So when we 15 make these measurements and if they go above our trigger 16 level, then we start our extraction.

So we have our gas-monitoring probes. We look 18 at our -- some of the on-site structures, our catch 19 basins.

20 We're down to two extraction well vaults, and 21 that's going to be important here because we only have 2 22 left out of about 20 some because those have been 23 excavated as part of our PCB hot spot removal action.

And walking back over here to the map, that 25 removal action is taking place down here kind of on the Page 72

25

- 1 south side of the landfill. So what we have here is 2 excavation anywhere from 2 to 3 to about almost 10 feet 3 deep.
- And if you guys can remember December, we had a lot of rain in December. So now there's quite a large 6 pond down in that area.
- Everything was pretty normal in December. We 8 have an action level that's half of our regulatory limit 9 that if it gets up to 2 1/2 percent methane, then we 10 start extraction. That's our trigger level to move in 11 our extraction units and remove methane.
- 12 And if we do go over that limit, usually it 13 takes us about a day to bring it back down. We are kind 14 of close on one of them. At our gas monitoring probe 15 No. 24, it was almost up at 2 1/2 percent but just 16 barely under it.
- So we -- if it gets up that high, then we 18 usually go back a week later so to see if it's gone up. 19 If it's gone up, we do extraction. If it hasn't, then 20 we don't.
- And in this case, we went back; things are 22 normal. December 5th, I think that was before the big 23 rains hit. It's only at 2.3 percent.
- So again, notice that all but two of the 25 extraction well vaults have been removed during this

Page 73

1 removal action. Due to the rainy weather, much of this 2 area is now under water.

- And these are kind of our results for

  December. Nothing too special, which is usually what we
- 5 see here. Nothing has exceeded our action limits, and 6 there's no need for extraction.
- 7 Next slide.
- And here's just a graph of the methane 9 concentration at our gas-monitoring probes. If we get 10 up here to 2 1/2 percent, we extract. If we are below 11 2 1/2 percent, we are in good shape. And this is our 12 regulatory limit up here.
- Next slide.
- Now, these are the gas probes that we are 15 concerned about because these are the ones over on the 16 University of California at San Francisco research 17 compound. If they get up above 2 1/2 percent, which you 18 can see that they occasionally do on this blue line on 19 our Gas-Monitoring Probe No. 24, it builds up; it builds 20 up, goes over the limit. We turn on our extraction on 21 and drop it back down to zero, and it -- usually it 22 takes two or three months to build back up before we 23 have to extract again.
- And what we are doing is: All landfills
  produce methane. And so we have got this monitoring
  Page 74

1 program and this extraction program in place until we 2 can get the final remedy in place on the landfill. So 3 until we do get that final remedy in place, we'll 4 continue with the monitoring program and this kind of 5 extraction.

- 6 All right. Next slide.
- All right. This is what happened in January, 8 and it was bit of a surprise to us. We go out and do 9 our monitoring. And Gas-Monitoring Probe 1, 10 3.3 percent. So that exceeds our action level. That 11 tells us to go out and extract.
- This measurement is taken at 10 o'clock, and 13 by 2:30 it's up to 25 percent. Of course, they are 14 going and checking their meters. They are recalibrating 15 their meters. They are bringing in other meters to make 16 sure that, you know, what we are reading is a real 17 value; and they all check out.
- So Gas-Monitoring Probe No. 7, 7.2 percent, 19 and all the way up at 32 percent by 2:30.
- I'm going to show you over here on the map
  where those are. Gas-Monitoring Probe No. 1 is over
  here in the corner [indicating] and on the U.C.S.F. side
  where in the barrier where we collect the landfill gas through
  here [indicating]. And Gas-Monitoring Probe No. 7 is
  off over in this area [indicating].

Page 75

- So, you know, they both exceed our trigger levels. They bring the extraction equipment out and start extracting.
- So as of this morning, let's see, we are down to .4 percent at the gas-monitoring probe that is over there in the corner of the map. That's No. 1. And we are down to 6.8 percent at No. 7, and so we are continuing our extraction out there.
- 9 Now, let me show you what I think is 10 happening. I'm not sure. It's just a theory. And I 11 actually forget who I have to thank at the BCT for 12 coming up with this idea.
- But here's the landfill cap right here
  14 [indicating]. This is an impermeable cap. So any
  15 methane that's produced inside this landfill -- and
  16 remember, all landfills produce methane -- any methane
  17 produced inside here wants to rise up 'cause it's less
  18 dense in there. Like a helium balloon, it's going to
  19 want to rise up.
- It's going to rise up; it's going to hit that
  21 cap, and it's going to want to look to the edge of the
  22 cap. So ordinarily it might vent over here. You know,
  23 we get some readings in these electrical vaults rooms
  24 from time to time which shows us that we do have some
  25 venting of methane over here.

- But now it comes over here, and this is a 2 pond. So this is saturated soil over here, not easy for 3 the methane to come up and vent. So it might want to 4 push out over this way.
- So couple things are happening. We'll just increase our monitoring frequency and extract when we have to, keep the conditions safe.
- And then over in the pond itself, I believe it's -- we're scheduled to -- been working on the discharge permit now for about two weeks. And I think --
- Gerry, aren't we within about two days of 13 turning that thing on?
- We probably got about pretty close to -- I 15 know the water level's been dropping; but at one time, 16 we thought we had about a million gallons of water to 17 pump out there.
- So that's kind of the situation. We just wanted to make sure everybody knows about it. Methane levels did go up.
- But the monitoring program's in place. It 22 works. Extraction equipment is in place, and we're 23 extracting at both those probes, and the one probe is 24 down to below the limit. We'll keep monitoring it. And 25 the other probe we're still extracting from.

1 alternatives.

- One, we always have to have for the comparative alternate that's no action, which, you know, nobody thinks that's going to happen. But that's one that we are just required to compare stuff to.
- The other one is -- you know, has as part of 7 it, landfill gas extraction has a series of points to 8 vent the cap.
- 9 And then, of course, the other alternative is 10 the removal alternative, removal of the landfill waste.
- So we have talked about putting some vents in 12 the cap. But what I'm thinking is what's going to 13 really happen is when we drain this pond out, and it's 14 going to start venting naturally just around that cap.
- And you got to remember too that methane is 16 not a toxic gas, but it is an explosive gas. So if it 17 has a preferential pathway to go through, then it can 18 build up to these levels that are not considered safe, 19 and that's when we have to do our extraction.
- 20 MS. PENDERGRASS: Mr. Tisdell and then 21 Mr. Hanif.
- MR. TISDELL: Mr. Brooks.
- 23 MR. BROOKS: Yeah --
- 24 MR. TISDELL: Isn't there --
- 25 MR. BROOKS: -- Mr. Tisdell.

Page 77

- MS. PENDERGRASS: Okay.
- MR. BROOKS: So any questions on our landfill 3 gas? I don't see any.
- 4 Oh, Melita.
- 5 MS. RINES: Okay. So you're saying that it 6 was -- at 2:30 it was 32 percent?
- MR. BROOKS: Yeah, 32 percent. And just 8 for -- just, you know, kind of so you can understand 9 what these -- what these numbers mean, there's a lower 10 explosive limit for methane, and there's an upper 11 explosive limit.
- So there's a point at which, like in your car, 13 your mixture's too lean; your -- you know, your car 14 won't run. It's too rich; your car won't run. So too 15 lean is anything under 5 percent. Too rich is anything 16 over 15 percent.
- MS. RINES: Okay. So if you're -- you're setting the idea that it's venting from under the cap?
- MR. BROOKS: Yeah, mm-hmm.
- 20 MS. PENDERGRASS: Thank you.
- 21 MS. RINES: Can you not vent the cap itself?
- MR. BROOKS: Yeah, we can, and we have talked 23 about that too.
- Like in the feasibility study for the
  25 landfill, there's a couple of -- actually, there's three
  Page 78

- 1 MR. TISDELL: -- a monitoring well right in 2 the middle of the landfill?
- MR. BROOKS: Yeah. We have a couple 4 monitoring wells in the landfill.
- 5 MR. TISDELL: You -- okay. Now, wouldn't 6 that -- you know, instead -- wouldn't that tell you 7 something if you look at them instead of letting all of 8 it go, you know, out wide?
- 9 MR. BROOKS: Yeah. One -- The monitoring 10 wells could be used for vents in the cap. They could 11 be. Right now they're closed off, but they could be 12 used for vents.
- There's certainly -- When the groundwater 14 samplers go out there, they actually need to remove the 15 cap and let them, you know, air out a little bit because 16 you ha- -- they have methane in them already when they 17 open them up.
- 18 MS. PENDERGRASS: Mr. Hanif?
- MR. HANIF: Do you know the reasoning for such 20 sharp fluctuations?
- MR. BROOKS: Well, now, this is just a theory, 22 and I can't say that I actually know it, but it's an 23 idea and actually wasn't even my idea. Was it --? It 24 was Carla or Jim Ponton from the Water Board who brought 25 this up. And I thought about it, and I thought: Well, Page 80

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1 that sounds like a good idea.
                                                           1 our monitoring -- First of all, our monitoring tries to
        But I think it's just because the methane
                                                           2 be done the day before the BCT meetings so if we have
 3 is -- you know, ordinarily methane down in the southern
                                                           3 something come up we can report it to the regulators.
 4 part of landfill would have in this B group over
                                                                   But the week prior to that, what we like to do
 5 there . . .
                                                           5 is: We like to turn our extraction blowers on. We hook
        MR. HANIF: Would have what?
                                                           6 it up to our gas collection trench 'cause it's this --
 7
        MR. ATTENDEE: Antenna.
                                                           7 it's a 1400-foot-long trench that runs along this whole
                                                           8 side of the landfill. We hook our extraction blowers up
 8
        MR. HANIF: I can't hear you.
        MR. BROOKS: Okay, that's right. I did that
                                                           9 there, and we withdraw the methane.
10 before too. I'm a fast learner.
                                                          10
                                                                   And then we let it sit over the weekend and we
        So it's looking for a pathway out. So, yeah,
                                                          11 measure it on that Monday. So that would be -- you
12 I guess I -- actually, I don't know that, Chris, why it
                                                          12 know, if the RAB meeting's on the fourth Thursday, then
13 would fluctuate, why the -- why it just doesn't stay the
                                                          13 it's on the Monday preceding the fourth Thursday that we
14 same all the time. Yeah, it's really unusual.
                                                          14 do our monitoring.
15
        MS. PENDERGRASS: Mr. Morrison?
                                                          15
                                                                   Unless we have a situation where, let's say,
        MR. MORRISON: Just a simple follow-up to
                                                          16 like in December we get some -- one of the points
16
17 Chris's question. Why in such a short time?
                                                          17 measures 2.3 or 2.4, that usually will come back a week
        MR. BROOKS: That it would change like that --
                                                          18 later, you know, a couple of weeks later, something like
18
        MR. MORRISON: Yeah.
                                                          19 that, just to be sure. We won't wait a whole month.
19
        MR. BROOKS: - from 3.3 to 25 percent?
                                                          20
                                                                  MS. PENDERGRASS: Okay. Well, thank you.
20
        MR. MORRISON: Yeah. It's only a few hours.
                                                          21
                                                                  Mr. Tisdell.
21
                                                          22
                                                                  MR. TISDELL: Have you had any more problems
22
        MR. BROOKS: I know.
        MS. PENDERGRASS: So at this point since you
                                                          23 with that -- with that -- what you call it, that wall?
24 said twice that you don't know, by the next RAB meeting
                                                          24 You know that polyurethane?
25 you might have some other speculations?
                                                          25
                                                                  MR. BROOKS: Yeah, the GundWall?
                                                 Page 81
                                                                                                            Page 83
        MR. BROOKS: Yeah. I could probably -- I
                                                                  MR. TISDELL: The who?
                                                           1
2 could probably even speculate more and more tonight.
                                                                  MR. BROOKS: Well, we call it the GundWall.
                                                           2
        MS. PENDERGRASS: So perhaps we could --
                                                                  MR. TISDELL: Yeah --
                                                           3
        MR. FORMAN: Yeah, we're going back with -- we
                                                           4
                                                                  MR. BROOKS: That's the manu- --
                                                                  MR. TISDELL: -- GundWall.
5 have got some -- a couple of companies that are -- do
                                                           5
6 this for a living, the landfill experts; and we are
                                                           6
                                                                  MR. BROOKS: That's the manufacturer of it.
7 going to go back and --
                                                           7
                                                                  MR. TISDELL: Have you had any more trouble
                                                           8 out of that with the methane going over that way?
        MS. PENDERGRASS: Okay.
                                                                  MR. BROOKS: Well, that's what we are talking
9
        MR. BROOKS: Yeah.
                                                          10 about here, yeah. This is the problem that we are
        MR. FORMAN: -- figure this out.
10
        MS. PENDERGRASS: So as an action item, would
                                                          11 having with it right now. And there's --
12 it make sense to just kind of provide a --
                                                          12
                                                                  MS. PENDERGRASS: Okay.
                                                                  MR. BROOKS: There's a couple of things that
13
        MR. BROOKS: We'll --
                                                          13
        MS. PENDERGRASS: -- follow-up report?
                                                          14 we'll just try to get into the next meeting when I have
14
        MR. BROOKS: -- give an update next time out.
                                                          15 a little bit more time --
15
16 Yeah, you bet.
                                                          16
                                                                  MS. PENDERGRASS: Okay.
        MR. FORMAN: Sure.
                                                          17
                                                                  MR. BROOKS: -- to talk about it. What do you
17
                                                          18 think I'm going to say? The GundWall's been working
        MS. PENDERGRASS: All right.
18
19
        Mr. Dacus.
                                                          19 perfectly. Look, it's 25 percent.
        MR. DACUS: Yes, Mr. Brooks. On the -- On
                                                          20
                                                                  MR. FORMAN: Yeah, I just want to say,
20
21 your monitor, do you have a regular schedule for the
                                                          21 Ms. Pendergrass, that we discovered this, I believe,
22 monitoring, or that's just based on, say, well, we do it
                                                          22 Tuesday --
23 one day, and the next week we may do it another day?
                                                          23
                                                                  MR. BROOKS: Tuesday morning.
        MR. BROOKS: Yeah, we do have a regular
                                                          24
                                                                  MR. FORMAN: -- Monday night.
25 schedule. What we'd like to do is: The week prior to
                                                          25
                                                                  MR. BROOKS: Monday night.
                                                 Page 82
                                                                                                            Page 84
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MR. FORMAN: Okay.

1

- MR. BROOKS: Monday night. 2
- MR. FORMAN: Tuesday morning got as much scoop 3 4 as we could, told the BCT a few hours later. And so 5 we're still --
- MS. PENDERGRASS: Trying to figure it out.
- MR. FORMAN: -- figuring this one out. 7
- MS. PENDERGRASS: Okay. All right. Very 8 9 fine.
- 10 We have just a couple more minutes, so I want 11 to extend an opportunity to our audience if they have 12 any comments or have any questions.
- Barring nothing, I have a question before we 14 adjourn tonight of each of the RAB members.
- MR. TISDELL: Yes. 15
- 16 MS. PENDERGRASS: So the question of the RAB 17 members tonight is this: You all have been actively 18 working with the RAB for the last year as well as you 19 are going to continue your work for the rest of the 20 year. So let's start off this year with sharing with 21 one another -- and if everybody would just limit their 22 comment to just the answering the question.
- And the question is, what is it that you're 24 actually trying to do by sitting on the RAB? What is it 25 that you're trying to affect in the community by your

- MS. PENDERGRASS: No, you -- I'm sure there's 2 a reason why you're sitting at this table tonight.
- MR. HANIF: Comic relief.
- MR. BROOKS: I'm here to clean up the Shipyard 5 in the best way that I know how, and clean up is what I 6 like to do the best. I'm trained to do this, and it's a 7 part of my job I like to do the best. So that's why I'm 8 here for.
- MS. PENDERGRASS: Mr. Forman?
- 10 MR. FORMAN: Yes.
- Other than the obvious reasons that I am here 12 and have an excellent attendance record when I'm not 13 overseas is that I am a true believer, like I said the 14 first RAB meeting when I became the RAB co-chair here, 15 in that even if the Navy cleans up the base and does an 16 outstanding job of that, if the community doesn't really 17 know what's going on and has a chance to question us and 18 review things and interact with us, then it will not be 19 for the good.
- I'm a big believer in everybody understanding 21 what we're doing and for everything the Navy does to be 22 transparent. I think that's important, and that's what 23 I strive for.
- 24 MS. PENDERGRASS: Thank you.
- 25 Mr. Morrison.

Page 85

1 presence on the RAB?

- And if we could start with Miss Brownell. And 3 I do know the difference between the regulators being 4 paid here, but they also have a --
- DR. TOMPKINS: That's a big difference. 5
- MS. PENDERGRASS: -- have a question. 6
- MS. BROWNELL: Yes. The short answer would 7
- 8 be: I'm required to be here, but that's the short --
- 9 MS. PENDERGRASS: Pass the mic.
- MS. BROWNELL: I hope that I can help in any 11 way with the RAB and provide any information that --12 from the Health Department City Redevelopment Agency 13 developer perspective and also more importantly to take 14 any information back the other direction and just hope I 15 can help out as much as possible. Thanks.
- MS. PENDERGRASS: Miss Brown? 16
- 17 MS. BROWN: I'm hoping to take information 18 back to the artists at the Shipyard about what's going 19 on.
- 20 MR. DACUS: Well, my -- for my purpose being 21 on the Board is to try to get enough information back to 21 in EPA, one of the missions of the Department of Toxic 22 the neighborhood and to my organization that I'm 23 involved with.
- 24 MS. RINES: Ditto.
- 25 MR. BROOKS: I'm not the RAB. Am I?

MR. MORRISON: One of my reasons to sitting on 2 the RAB is to ensure equal opportunity for participation

- 3 in jobs and other opportunities, also to relay the
- 4 ideas, perceptions, and values of my friends and
- 5 neighbors to the RAB board, and also because I'm
- 6 interested in environmental technology. MS. PENDERGRASS: Thank you.
- MR. WORK: As part of EPA's -- part of the 9 agency's mission to involve the community in all of the 10 decision-making up to the selection of the remedy of the 11 cleanup of the site and in this case also reuse.
- MR. HANIF: My purpose for sitting on the RAB 13 is, one, to gain awareness so I can impart that 14 information to the community and also ensure that the 15 people that are on the program are trained appropriately 16 as well as being aware of and hopefully effect job 17 opportunities for those people in our program that are 18 residents within Hunters Point.
- MS. PENDERGRASS: Okay. Thank you.
- MR. LANPHAR: Excuse me. Similar to Michael 22 Substances Control is to ensure that the public are 23 involved and informed in the decision-making that goes 24 on at the Shipyard for the cleanup. So that's one of my 25 roles is to make sure that happens and be involved in

Page 86

Page 88

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1 that. 1 like --Also, I see a role as regulators from the MS. PENDERGRASS: Oh, my God, my heart. Next 3 State of California to represent the views of the State 3 month. Next month -- great -- I'll ask you all if you 4 and its laws and regulations in its interpretation of 4 will provide any information that you might want to 5 what needs to be done here and how it needs to be done 5 share with us in how we can make this more relevant to 6 here. So representative of the State of California. 6 the greater community, more relevant to you as a RAB And also, I hope to be able to help the 7 member, and any suggestions to make this a more 8 understanding, help the community to understand what the 8 meaningful two-hour experience for you each month. 9 issues are, what the problems that we are trying to face So with that, unless there's something dying 10 and to translate those, how to translate those into 10 to say --11 concepts that are more easily understandable. 11 MR. TISDELL: Dying. I think we all try to do that on the BCT. I 12 MS. PENDERGRASS: Mr. Tisdell. 13 think Keith did a good job of that in his presentation, MR. TISDELL: I would like to know your answer 13 14 try to make sure we all understand what's going on. 14 to that question. And sorry for the aside, but Ray was --MS. PENDERGRASS: This meeting is adjourned. 15 16 actually just asked me. So that's sometimes our role (Off record at 7:49 p.m., 1/26/06.) 16 17 too --17 ---000----18 MS. PENDERGRASS: Thank you. 19 MR. LANPHAR: -- and why I'm here and . . . MS. PENDERGRASS: All right, Dr. Tompkins. 20 DR. TOMPKINS: Reason why I'm here is, one, to 21 22 represent Bayview-Hunters Point Coalition, and our 23 mission is to see that the best technology is applied to 24 this community, who's historically got the short end of 25 the stick, and to protect the community in that Page 89 1 population which is at greatest risk. On a personal 1 CERTIFICATE OF REPORTER 2 note, it's also to keep my word to my father that I 3 would work for those efforts. I, CHRISTINE M. NICCOLI, Certified Shorthand 4 Reporter of the State of California, do hereby certify 4 MS. PENDERGRASS: Thank you. 5 that the foregoing meeting was reported by me 5 Mr. Tisdell. 6 stenographically to the best of my ability at the time MR. TISDELL: To be informed, to keep an eye 7 and place aforementioned. 7 on the people so that way nothing get -- nothing gets IN WITNESS WHEREOF, I have hereunto set my 8 away. Thank you. 9 hand this 16 th day of Intruction MS. PENDERGRASS: Well, thank you all for 10 sharing that. And as you can all see, there's a lot of 10 11 commonality in your statements. So I think we are all 11 12 on the same page. So I think we can remember that CHRISTINE M. NICCOLI, C.S.R. NO. 4569 13 everybody's striving for same goal when they have some 14 disagreements. 15 The other thing I'd like to do -- or add to 16 this tonight is that next week if the time permits, I'll 17 ask you all to think about --18 MR. HANIF: Next week? 19 MS. PENDERGRASS: -- one sentence, one 20 comment --21 MR. HANIF: You said, "next week." 22 DR. TOMPKINS: Next month. 23 MR. HANIF: Next month.

Page 91

Page 92

24

25

MS. PENDERGRASS: What did I say?

MR. HANIF: You said "next week"; and I'm,

## $\boldsymbol{Multi\text{-}Page}^{^{TM}}$

1 2	
3 4	
Page 94	

June 5, 2006

Diane Silva **SWDIV Records Manager Facilities Engineering Command** 1220 Pacific Highway San Diego, CA 92132

Subject: Hunters Point Shipyard Information Repository/Administrative Record **Submittals** 

Dear Ms. Silva,

Enclosed are three copies of the following documents for submittal to the Hunters Point Shipyard Information Repository/Administrative Record:

- Final January 26, 2006 Restoration Advisory Board Meeting Minutes
- Final February 23, 2006 Restoration Advisory Board Meeting Minutes
- Final February 23, 2006 Restoration Advisory Board Meeting Transcript
- Final March 23, 2006 Restoration Advisory Board Meeting Minutes
- Final March 23, 2006 Restoration Advisory Board Meeting Transcript
- Final April 27, 2006 Restoration Advisory Board Meeting Minutes
- Final April 27, 2006 Restoration Advisory Board Meeting Transcript

Please feel free to contact me or Angela Williams (Community Relations Specialist [619-338-0798, ext. 12]) if you have any questions.

Thank you,

Saravanan (Eli) Vedagiri, P.E.

**Program Manager** 

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